

REMARKS

The Examiner is thanked for the courtesies extended in the Examiner Interview conducted May 18, 2005. The foregoing amendments and following remarks are consistent with the discussions in the Interview.

Upon entry of the foregoing amendments, claims 1-8 and 16-17 will be pending in the present application.

The Office Action mailed January 10, 2005 rejected claims 1-7 and 9-14 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,527,071 to Ausiello (“Ausiello”), and indicated that claims 8 and 15 contained patentable subject matter, and would be allowable if amended into independent form.

As agreed in the Interview, the Applicants have amended claim 1 to recite that the combustion mode of at least one of the cogeneration system engines is controlled to meet a demanded heat and power load.

As discussed, Ausiello teaches only the control of starting and stopping of its engines, and contains no discussion, or even a suggestion, of controlling the combustion mode of the engines to alter the ratio of heat and power produced by individual engines. *See, e.g.,* Ausiello at 5:42-62 (describing stop/start control of engines by processing and control unit 15).

In contrast, the present invention, as claimed and described in the specification, is directed to control of the operating engines’ *combustion mode*, as well as the total number of engines. *See, e.g.,* Specification at 9:15-10:26 (describing three combustion modes, compression ignition mode MB (heat generation-to-power generation ratio ~0.78), spark ignition mode MC

(heat/power ratio ~1.67), and retarded spark ignition mode MD (heat/power ratio ~7). Because different combustion modes result in the engines producing heat and power in different proportions, by controlling the combustion mode of individual engines, the present cogeneration system can match the number of operating engines and their individual combustion modes more efficiently and accurately to the demanded heat and power loads. *Id.* at 11:13-19 (describing how, if the demanded heat/power ratio is between the ratios generated in spark mode MC and retarded spark mode MD, the number of engines operated and the distribution of engines operating in either mode MC or MD can be altered to provide the demanded heat and power in the desired ratio). In this way, the present cogeneration system provides significantly improved energy production efficiency.

In addition to the amendments to claim 1, the Applicants have:

- canceled claims 9-15, without prejudice to the subject matter therein, as substantially duplicative of claims 2-8;
- added new claim 16, depending from claim 1, to further recite controlling the number of engines operated to meet heat and load demands, in addition to controlling combustion mode;
- canceled claim 2, without prejudice, and added new claim 17 in its place to recite the cogeneration's system's optimization of engine and combustion mode management to match as closely as possible the demanded heat and power loads; and
- added new claims 18-19, directed to a method of operating a cogeneration system in the manner of the present invention.

In view of the foregoing amendments and remarks, the Applicants respectfully submit that claims 1, 3-8 and 16-19 are in condition for allowance. Early and favorable consideration, and issuance of a Notice of Allowance for

these claims is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #029118.53314US).

Respectfully submitted,

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